Defining Project-Level Processes

- **Projects establish their defined processes by *tailoring* the organization's set of *standard processes* according to *tailoring guidelines*.**
- **"Tailoring" – Adjustment of project activities to reflect the uniqueness of the project while keeping the project's goals in mind**
- **Why tailoring is needed**
  - **The organization's set of standard processes**
    - » **Must be *general* enough to apply to all projects**
    - » **May not be directly usable to perform a process (too general)**
  - **SSC San Diego projects vary widely**
    - » **Size – one person to 130+ person projects**
    - » **Complexity – research papers to tri-service system developments with multiple contractors and agencies**
    - » **Sponsors – SPAWAR, NAVAIR, NAVSEA, ONR, DARPA, …**
    - » **Type – research, system dev, SSA, fleet installation, services …**
    - » **Domain - C4ISR, marine mammals, decision support, fleet engr, …**
  - **The project's processes**
    - » **Must be *specific* enough to define *how* the project appropriately implements the organization's set of standard processes**

Tailoring Considerations

- Tailoring variables (from SPA Document)
  - Type of life cycle strategy: once-through (waterfall), incremental, evolutionary
  - Choice of life cycle activity: prototyping, maintenance
  - Appropriate system characteristics: COTS Software/Hardware, reuse, embedded firmware
  - Your policies, languages, hardware reserve, culture
  - Your acquisition strategy: contract type, contractor involvement
  - The programming environment in which the process will be used.
  - The standards that apply or may be imposed upon the project.
  - The financial constraints, contractual obligations and schedules which may be strictly determined by a sponsor.
  - The policies imposed by the sponsor or developing agency.
  - The technology that will be utilized.
  - The level of experience among the users of the process.
  - The amount of change which the project may encounter.

Tailoring Guidelines

Tailoring guidelines cover (1) selecting a standard process, (2) selecting an approved life cycle model, and (3) tailoring the selected standard process and life cycle model to fit project needs. Tailoring guidelines describe what *can* and *cannot* be modified and identify process components that are candidates for modification.

SSC San Diego's Tailoring Guidelines

- In "Description of SSC San Diego Software Process Assets" at http://sepo.spawar.navy.mil
- Select and tailor the development strategy (approved life cycle model) using IEEE/EIA 12207.0 Annex B
- Select and tailor standard processes and templates from the SSC San Diego PAL, or Department PAL
- What CAN be tailored: attributes that describe how the process is performed, such as number of phases/activities, roles, responsibilities, document formats, formality/frequency of reports or reviews
- What CAN'T be tailored: the intent, goals, objectives

Examples of What Can Be Tailored

Activity (Task)

Examples – design, manage, monitor

Tailorable – formality, frequency

Work Products

Examples – plans, design, test scenarios

Tailorable – name, format, media, precision

Resources

Examples – budget, schedule, tools, facilities, computers

Tailorable – provider, allocation method

Directives

Examples – policies, procedures, practices, standards

Tailorable – name, format, scope, formality.

Tailoring Process

Tailoring Process (IEEE/EIA 12207.0 Annex A)

1. Identify project environment - strategy, activity, requirements
2. Solicit inputs - from users, support team, potential bidders
3. Select processes, activities, documentation, responsibilities
4. Document tailoring decisions and rationale

Tailoring Process (SPA document)

1. Select and tailor processes
2. Document tailoring decisions and rationale
3. Apply and monitor the tailored processes

Tailoring Examples

PMG task - *Measure Project Performance (take out Tier I/II ref's)*

- **Subactivity a. *Collect data***
- **Tier I Minimum Action/Artifacts**
  - » **Critical measures taken for management**
- **Additional Tier II Minimum Action/Artifacts**
  - » **Actual performance measured and compared to plans; graphs developed**
- **Advanced Artifacts/References**
  - » **MS Project used**

What is tailorable

- **Tier I: Measures used (e.g., $, milestone dates, % complete)**
- **Tier II: Measures used, type and format of graphs used to compare planned vs actual**

What is NOT tailorable

- **Tier I: Critical measures taken for management**
- **Tier II: Actual performance measured and compared to plans; graphs developed**